

REMARKS

Applicant has amended claims 1 and 2 and added new claims 3 and 4 to emphasize non-obvious features of the claimed fluid compositions. The amended claims and new claims are supported by the original claims and as-filed specification, e.g., at ¶ [0134]. No new matter has been introduced.

Applicant respectfully requests reconsideration of the 35 U.S.C. § 103(a) rejection of claim 1 over U.S. Patent No. 6,231,782 to Shimomura et al. ("Shimomura") over U.S. Patent No. 6,667,285 to Kawahara et al. ("Kawahara").

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. M.P.E.P. § 2142. A prior art reference must be considered in its entirety, including portions that would lead away from the claimed invention. M.P.E.P. § 2141.02(VI).

With regard to Shimomura, as the Examiner admitted at page 5, line 15- page 6, line 2 of the Office Action, Tables 6 and 7 indicate that "a mixture of hydrocarbon and ester oils is superior to polyol ester and/or polyol ester and polycarboxlic acid ester oils." Having considered the teaching of Shimomura, one of ordinary skill in the art without any knowledge of the claimed invention would not have had any legitimate reason to choose a polyol ester oil as a base oil, as recited in claim 1, over other oils including a mixture of hydrocarbon and ester oils.

Moreover, in order to reject a claim based on the "applying a known technique to a known device (method, or product) ready for improvement" rationale, the Examiner

must show that the results of applying this known technique to a known device (method, or product) would have been predictable. See M.P.E.P. § 2143(D).

With regard to the combination of Shimomura and Kawahara, the Examiner asserted that it would have been obvious to modify Shimomura to include a polyol ester as a base oil as taught in Kawahara to improve the hydrolytic stability and decrease the viscosity of the composition, referring to col. 3, lines 16-25 of Kawahara. Applicant respectfully asserts that the Examiner appears to have misinterpreted Kawahara, as a whole, including the above-mentioned portion. For example, Kawahara teaches at col. 2, lines 55-59 the following:

certain aliphatic branched-chain carboxylic acid monoalkyl esters, prepared by ... esterification of a specific aliphatic saturated branched-chain carboxylic acid and a specific monohydric alcohol, are excellent in hydrolytic stability, electrical insulating properties and miscibility with refrigerants.

Kawahara also teaches at col. 3, line 16-23 (the same portion that the Examiner relied on) the following:

(I) at least one aliphatic saturated branched-chain carboxylic monoalkyl ester represented by the aforementioned formula
(1) achieve(s) excellent advantages when used in combination with (II) a conventional lubricating oil for refrigerators, such as a fatty acid polyol ester, a phthalic acid ester, an alicyclic dicarboxylic acid ester, a polyvinyl ether, a hydrocarbon oil, a polyalkylene glycol or the like.

The above-mentioned portions of this reference indicate that Kawahara, considered in its entirety, teaches that the presence of aliphatic saturated branched-chain carboxylic monoalkyl esters lead to improved hydrolytic stability of the conventional lubricating oils listed above. Kawahara neither discloses nor suggests that the presence of a polyol ester oil leads to improved hydrolytic stability. One of ordinary skill in the art, having considered the teachings of Kawahara, therefore, would not have

recognized use of a polyol ester oil, one of the conventional lubricating oils, as a known technique to apply to the oil composition of Shimomura to yield predictable results such as improved hydrolytic stability.

For at least the above reasons, the combination of Shimomura and Kawahara would not have been obvious to one of ordinary skill in the art at the time of invention, absent use of impermissible hindsight based on a prior reading of the present application. See M.P.E.P. §§ 2141.01(III) and 2145(A).

Applicant also respectfully requests reconsideration of the 35 U.S.C. § 103(a) rejection of claims 1-2 over U.S. Patent Application No. 2002/0123436 to Osumi et al. ("Osumi") in view of U.S. Patent No. 5,820,777 to Schnur et al. ("Schnur").

Amended claims 1 and 2 recite, among other things, "a refrigerant consisting of hydrofluorocarbons."

Neither Osumi nor Schnur teaches at least the above-mentioned feature of amended claims 1 and 2. As noted by the Examiner at page 4 of the Office Action, Osumi discloses hydrofluorocarbon refrigerants (HFCs) that can be used with carbon dioxide refrigerant. For example, Osumi at ¶¶ [0078]-[0083] discloses a mixture of carbon dioxide and HFCs, specifically, at ¶ [0082], within the range of 1 to 200 parts by weight of HFCs per 100 parts by weight of carbon dioxide. Osumi, however, neither discloses nor suggests refrigerants consisting of HFCs only, absent carbon dioxide. Moreover, as admitted by the Examiner, "Schnur is not combined with Osumi to disclose a refrigerant." Office Action, page 7.

Since Osumi in view of Schnur fails to disclose or suggest at least the above-mentioned feature of amended claims 1 and 2, Osumi in combination with Schnur does not render the claims obvious.

New claim 3 recites, among other things, "a polyol ester as a base oil," and therefore is not obvious over Shimomura in view of Kawahara for at least the same reasons set forth above with respect to amended claim 1.

New claims 3 and 4 recite, among other things, "a refrigerant consisting of hydrofluorocarbons," and therefore are not obvious over Osumi in view of Schnur for at least the same reasons set forth above with respect to amended claims 1 and 2.

Additionally, new claims 3 and 4 also recite, among other things, "a phosphorothionate ranging from 0.01 % to 5 %." As discussed at pages 6 and 7 of the May 26, 2009 Reply to Office Action, the as-filed specification, e.g., in Tables 1, 4, 5, 7, and 8, discloses that compositions comprising a phosphorothionate ranging from 0.01 % to 5 %, as recited in new claims 3 and 4, have superior unexpected beneficial results, i.e., superior anti-wear property, friction property, and stability, in comparison with examples that do not have a phosphorothionate in combination with a phosphorus-based additive other than the phosphorothionate.

For at least this additional reason, new claims 3 and 4 are non-obvious in view of the combination of Osumi and Schnur. See M.P.E.P. § 2143.

Entry of this Amendment after Final Office Action under 37 C.F.R. § 1.116 is proper in order to place the claims in condition for allowance or in better form for appeal. The proposed amendment does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as searched

and examined. This Amendment, therefore, allows for immediate action by the Examiner.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application, withdrawal of the rejections, and timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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